U.S. Department of the Interior Bureau of Land Management White River Field Office 73544 Hwy 64 Meeker, CO 81641

## ENVIRONMENTAL ASSESSMENT

**NUMBER**: CO-110-2006-126-EA

**CASEFILE/PROJECT NUMBER:** Application for Right-of-Way - COC69835

**PROJECT NAME**: EnCana Eureka/Double Willow Exploration – Taylor Reservoir Pipeline

**LEGAL DESCRIPTION**: T3S, R97W, Sec. 7, 8, 17-19, Sixth PM, Colorado

**APPLICANT:** EnCana Oil & Gas (USA) Inc.

### **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

**Proposed Action:** EnCana filed an application on March 7, 2006 with the Bureau of Land Management (BLM) for a right-of-way grant under the Federal Land Policy and Management Act of 1976, as amended, to authorize the installation of a temporary six-inch surface pipeline to transport water from Taylor Reservoir in the Hunter Creek drainage (T3S, R97W, SESE Sec. 8 and NENE Sec. 17) to an existing well pad on Rio Blanco County Road 69 (T3S, R97W, SENW Sec. 19). (See Figure 1) The water would be used for completing two wells at that location – 8803B F19 397, and 8806C F19 397. The right-of-way grant would be issued for a short term, limited to three years or less.

The length of the pipeline is estimated at 16,791 feet (3.2 miles), of which 15,961 feet (3.0 miles) would be on public land administered by BLM. An estimated 6,675 feet would be within EnCana's Eureka Unit and 9,196 would be outside the unit. The pipeline would leave Taylor Reservoir, be buried at its crossing with the Hunter Creek Road, proceed uphill and southwest adjacent to a two-track for about 4,110 feet and then turn northwest along an existing road that was installed to access an existing well pad (Riata Govt. 397-17-1) for about 2,375 feet until it reached CR 69. At that point, the line would be buried at the well pad access road and then placed on the east side of CR 69 as it proceeded south by southwest toward the F19 397 well pad. (See Figure 2) It would then be buried at its crossing of CR 69 and brought to the well pad. EnCana is requesting a 30-foot wide right-of-way. Potential disturbance is estimated at 1,200 square meters, about one-tenth of an acre, at the three road crossings. Half the disturbance would be of the existing roadways and half would be of vegetated areas adjacent to the roads where the pipeline would be buried and then brought back to the surface. About 800 square meters of disturbance would be on public land.

Pipe will be delivered to the project area and strung along the roads and then welded up in sections within the roadway. A side-boom and trackhoe will be used to lift the pipe, extend it six to ten feet away from the road surface and place it on the ground. Alternatively, in some sections, the pipe would be installed using a cable and wire system and dragged into place. All construction equipment would remain on the existing roadways. The pipe would be supported with steel T-posts as necessary to prevent movement downslope.

The completion of the two wells could require up to 50,000 barrels of water (6.5 acre-feet). After completion of the two wells at the F19 397 location, the pipeline would be used to deliver water to an existing water pipeline along CR 69 that provides water to drilling locations in the Eureka and Figure Four Units.

**Buried Pipeline Alternative:** Under this alternative, EnCana would install a permanent pipeline between Taylor Reservoir and its intended water recycling facility which is adjacent to the F19 397 well pad location. The design of that facility is not yet final and no Environmental Assessment has been completed for that facility. However, since the temporary surface line and the permanent buried line would share much the same function and would be installed on much the same route, the buried line is considered here as an alternative.

The buried line would also be up to 10 inches in diameter and would follow the same route except that it would leave existing roads near the 397-17-1 well pad and proceed cross-country due west to CR 69. (See Figure 2) At that point, it would cross the road and proceed along the west side of CR69 to the proposed recycling facility and the F19 397 well pad. The length of this pipeline route is estimated at 13,623 feet (2.6 miles), of which 12,793 feet (2.4 miles) would be on public land. Potential disturbance is estimated at 15.6 acres, assuming a 50-foot wide construction easement and disturbance. Disturbance on public land would be 14.7 acres. Surface that remained unvegetated after reclamation would be limited to the roads crossed by the pipeline.

This pipeline would be expected to provide freshwater on a long-term basis for EnCana operations in the Figure Four and Eureka Units. Connected to the existing water pipeline that goes south along CR 69 and to the water recycling facility on CR 69, the water would be used for well drilling and completion, dust abatement on roads and for mixing with recycled water.

**No Action Alternative:** The pipeline installation would not take place.

#### **ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD:** None.

**NEED FOR THE ACTION:** EnCana is pursuing the Proposed Action in order to fully exercise its federal mineral lease rights in the Eureka and Figure Four Units. EnCana purchased the rights to the water in Taylor Reservoir for drilling, completion, dust control and other oil and gas development activities. The most efficient way to transport the water to drilling locations is by means of a pipeline. The alternative would be transportation by water trucks and frac tanks.

Truck transportation is a feasible alternative but would increase traffic along area roads and would cost much more.

<u>PLAN CONFORMANCE REVIEW</u>: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

<u>Decision Number/Page</u>: Page 2-49: "Make public lands available for the siting of public and private facilities through the issuance of applicable land use authorizations, in a manner that provides for reasonable protection of other resource values."

<u>Decision Language</u>: The Proposed Action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The action conforms to the decisions/pages of the plan listed above

# <u>AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:</u>

Standards for Public Land Health: In January 1997, the Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below.

#### **CRITICAL ELEMENTS**

#### **AIR QUALITY**

Affected Environment: The project area is within a Class II Prevention of Significant Deterioration (PSD) air quality area. No Class I PSD areas are located within 40 miles of the project area.

The principal air quality parameter likely to be affected by installation of the pipeline is the level of inhalable particulate matter, specifically, particles ten microns or less in diameter ( $PM_{10}$ ) associated with fugitive dust. Although no monitoring data are available for the survey area, it can be surmised that the air quality is good because the Colorado Air Pollution Control Division (APCD) estimates the maximum  $PM_{10}$  levels (24-hour average) in rural portions of western Colorado like the Piceance Basin to be less than 50 micrograms per cubic meter ( $\mu$ g/m³). This

estimate is well below the National Ambient Air Quality Standard (NAAQS) for  $PM_{10}$  (24-hour average) of 150  $\mu$ g/m<sup>3</sup> (CDPHE-APCD, 2005).

Environmental Consequences of the Proposed Action: The installation of the temporary pipeline on the surface would result in limited, short-term, and local impacts on air quality where the line crosses the three roads. At those points, constructing the trench to cross the road and filling the trench after installation of the pipeline would produce some increase in airborne particulate matter. However, the amount and duration would be very limited and airborne particulate matter would not exceed Colorado air quality standards on an hourly or daily basis. Following successful revegetation of the sites, airborne particulate matter should return to preconstruction levels.

Environmental Consequences of the Buried Pipeline Alternative: The installation of the buried pipeline would result in limited, short-term, and local impacts on air quality as the construction proceeds along the route. Digging the trench and then burying the line would produce a local increase in airborne particulate matter. However, the amount and duration would be very limited and airborne particulate matter would not exceed Colorado air quality standards on an hourly or daily basis. Following successful revegetation of the sites, airborne particulate matter should return to pre-construction levels.

Environmental Consequences of the No Action Alternative: None.

*Mitigation*: All areas cleared of vegetation for construction operations must be promptly reseeded as outlined in the vegetation section of this document.

#### **CULTURAL RESOURCES**

Affected Environment: The proposed pipeline route and the alternate route for the buried line were inventoried at the Class III (100 percent pedestrian) level on April 5 and 7, 2006 (Conner, 2006; Compliance Dated 4/19/2006). The inventory recorded one new isolated find - a debitage flake on an anthill (5RB5211). It was field evaluated as not eligible for listing in the National Register of Historic Places (NRHP).

*Environmental Consequences of the Proposed Action:* Installation of the proposed surface pipeline would not impact any known eligible cultural resources.

Environmental Consequences of the Buried Pipeline Alternative: Installation of the buried pipeline would not impact any known eligible cultural resources.

Environmental Consequences of the No Action Alternative: None

*Mitigation*: 1. The operator is responsible for informing all persons associated with the project operations that they would be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. Should historic or archaeological materials be uncovered during any project or construction activities, the operator would immediately stop

activities in the immediate area of the find that might further disturb such materials, and contact the authorized officer (AO). Within five working days, the AO would inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;
- the mitigation measures the operator would likely have to undertake before the site could be used (assuming *in situ* preservation is not necessary); and
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes at any time to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO would assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator would be responsible for mitigation cost. The AO would provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator would be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g), the holder of this authorization must notify the AO by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

#### **INVASIVE, NON-NATIVE SPECIES**

Affected Environment: The routes of the proposed and alternate pipelines were inventoried for the presence of any noxious or invasive weeds on April 18, 2006. A minimum distance of 50 feet on either side of the route was inventoried.

An infestation of musk thistle was identified at the eastern end of the pipeline near Taylor Reservoir and on the west side of the Hunter Creek Road as the pipeline route begins its ascent up the hillside. A second infestation of musk thistle was identified at the previously developed well pad in the NW of Sec.17, T3SR97W (well number 397-17-1). An infestation of common mullein was located at the same site. These were the only occurrences of noxious or invasive weeds noted on the route.

Environmental Consequences of the Proposed Action: The only points where installation of the surface pipeline might result in a disturbance sufficient to create an opportunity for establishment of noxious or invasive weeds are at the road crossings. Since this general area of the Piceance Basin has infestations of houndstongue, musk thistle, yellow toadflax, leafy spurge, black hensbane and spotted knapweed, the Proposed Action could create a noxious weed problem by importing weed seed on vehicles and equipment to these sites. Cleaning all heavy equipment to remove seed and soil prior to commencing operations on public lands within the project area would minimize the risk of infestation.

Environmental Consequences of the Buried Pipeline Alternative: The removal of about 16 acres of vegetation and disturbance of the soil would create an opportunity for establishment of noxious or invasive weeds along the route of the pipeline. Cleaning all heavy equipment to remove seed and soil prior to commencing operations on public lands within the project area would minimize the risk of infestation.

Environmental Consequences of the No Action Alternative: None.

*Mitigation*: Any invasive, non-native plants should be eliminated before any seed production has occurred. Eradication should make use of materials and methods approved in advance by the Authorized Officer.

The operator would clean all off-road equipment to remove seed and soil prior to commencing operations on public lands within the project area.

Other mitigation is included in the Vegetation section.

#### **MIGRATORY BIRDS**

Affected Environment: The sagebrush and pinyon/juniper communities found within the project area support a large array of migratory birds that nest during the months of May, June and July. Bird populations associated with these communities that have a high conservation interest (i.e., Rocky Mountain Bird Observatory, Partners in Flight program) are listed in the following table. Wyoming big sagebrush predominates on open areas of Hunter Ridge. Pinyon/juniper woodland is often encroaching into sagebrush habitat. Where pinyon/juniper is dominant on the main ridge, trees are mostly younger, of moderate size (under 15 to 20 feet tall) and dense. The Green-tail towhee is most typically found in mountain sagebrush and mountain shrub but also occurs in Wyoming sagebrush. There are no specialized or narrowly endemic species known to occupy the project area.

Birds of High Conservation Priority by Habitat Association			
Sagebrush	Pinyon-juniper		
Brewer's sparrow,	Pinyon jay, black-throated gray warbler,		
Green-tailed towhee,	Juniper titmouse, gray flycatcher, gray		
Sage Sparrow	vireo, violet-green swallow		

The pipeline route includes an existing jeep road, new construction through woodland habitat and paralleling CR 69. Mature pinyon/juniper woodland, open sagebrush and younger pinyon-juniper woodland mixed with sagebrush are found along the route.

Environmental Consequences of the Proposed Action: Installation of the pipeline would remove no woodland or sagebrush habitat. Installation during the migratory bird-nesting season (May through July period) would be disruptive and nests could be lost. Recent studies suggest that nesting density tends to be reduced (i.e., 50%) in close proximity (i.e., within 300') to roads. The segment of the pipeline adjacent to CR 69 is currently subjected to a high level of vehicle use, so the disruption would be less. Typically, one pair of high interest bird species occur per hectare. If installation occurs outside the nesting period of May 15 to July 15, minimal impact on

migratory birds would occur. Installation during the nesting period could result in the loss of migratory bird nests. The amount of nest loss would have no measurable influence on the abundance or distribution of breeding migratory birds at any landscape scale.

Environmental Consequences of the Buried Pipeline Alternative: About 16 acres of woodland and sagebrush habitat would be removed by this alternative. In the long term, successful reclamation would return some of the pipeline route's migratory bird habitat function. Overall, impacts would be similar to those of the Proposed Action.

Environmental Consequences of the No Action Alternative: None

Mitigation: None.

## THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4):

Affected Environment: The area of the Proposed Action and the Buried Pipeline Alternative includes no Federally-listed animal species and no habitat for such species. The special status species of concern in the project area include two Colorado BLM Sensitive Species, greater sage grouse and northern goshawk.

The potential for goshawks is low in the project area as preferred habitat is spruce/fir or spruce/fir mixed with aspen in the Piceance drainage. Rarely have goshawks been known to nest in mature pinyon/juniper woodlands, although this habitat is quite abundant on Hunter Ridge. Mature woodland habitat generally is located along the canyon rims and in the head of side draws to Hunter Ridge. The contribution of pinyon/juniper woodlands to the distribution, abundance and population viability of the goshawk is thought to be of small consequence. As discussed in the Terrestrial Wildlife Section, pinyon/juniper woodlands adjacent to the pipeline routes covered in this analysis were surveyed for raptor presence or nesting on March 20 and again on April 10, 2006. No evidence of goshawk nesting or presence was found. The majority of woodland habitat along the route is composed of younger trees of a size and structure with little potential for raptor nesting.

The current overall range for the greater sage grouse is located two miles to the south on Hunter Ridge. Although there is no evidence of sage grouse occurrence on Hunter Ridge in the past 20 to 30 years, historic use is probable. In the 1970's, Mike Getman reported the observation of a single sage grouse and DOW mapping identified a sagebrush park as historic habitat. These accounts occurred in a large sagebrush tract of habitat one mile to the north of the pipeline route. Pinyon/juniper encroachment has been on-going for many years and what may have been sagebrush in the past is now dense woodland habitat unsuitable for sage grouse. The pipeline terminus adjacent to CR 69 is at an existing well location and proposed water treatment and compressor facility. A sagebrush park at that location retains the most suitable habitat with characteristics suitable for sage grouse. Current activity and development in this area is of much greater impact than the proposed pipeline.

Environmental Consequences of the Proposed Action: The Proposed Action occurs outside the overall range for sage grouse and will not impact any currently occupied habitat. Since the pipeline route is primarily in woodland habitat or historic sagebrush habitat that is now dominated by pinyon/juniper trees, little currently suitable sage grouse habitat would be removed. This project would not affect the opportunity for future sage grouse habitat restoration. All mature pinyon/juniper woodland habitat suitable for raptor nesting adjacent to the proposed route was surveyed in March and April 2006 with no evidence of raptors currently nesting in the immediate vicinity of the proposed route.

Environmental Consequences of the Buried Pipeline Alternative: Same as the Proposed Action.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: Although goshawks are peripheral breeding species in pinyon/juniper woodlands in the Piceance Basin, the project area currently meets the standard for this special status species. All suitable nesting habitats to be disturbed by the project have been surveyed to assure nesting will not be disrupted. The standard with regard to the goshawk will be met.

# **THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES** (includes a finding on Standard 4):

Affected Environment: The routes of the proposed surface pipeline and the alternative buried pipeline were inventoried for the presence of any threatened, endangered or sensitive plant species on April 18, 2006. A minimum distance of 50 feet on either side of the route was inventoried.

Surface geology of the areas inventoried is derived from the Uinta Formation, which is not potential habitat for any special status plants. No surface outcrops of the Green River Formation, which is potential habitat, were present within the area inventoried. No threatened, endangered, or sensitive plant species were found within the areas inventoried.

Environmental Consequences of the Proposed Action: No impacts would be expected to occur to any threatened, endangered, or sensitive plant species from the actions proposed.

Environmental Consequences of the Buried Pipeline Alternative: Same as the Proposed Action.

Environmental Consequences of the No Action Alternative: None.

*Mitigation*: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: Public lands in the project area currently meet the standard and would continue to meet the standard after implementation of the Proposed Action.

#### WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored, or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used, and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the Buried Pipeline Alternative: Same as the Proposed Action.

Environmental Consequences of the No Action Alternative: None.

*Mitigation*: The operator will be required to collect and properly dispose of any solid wastes generated by the Proposed Action.

#### **WATER QUALITY, SURFACE AND GROUND** (includes a finding on Standard 5):

Affected Environment: Surface Water: The proposed and alternative pipeline routes extend from Hunter Creek on the east to the west side of Dry Ridge. Dry Ridge forms the divide between Hunter Creek and Dry Gulch. Hunter Creek is tributary to Piceance Creek. Dry Gulch is tributary to Black Sulphur Creek, which is a perennial tributary to Piceance Creek. Piceance Creek is a tributary of the White River, which ultimately flows into the Colorado River. Water quality standards and guidance for drainages within the Lower Colorado River Basin are included in CDPHE-WQCC Regulation No. 37 (2004a).

Black Sulphur and Hunter Creeks are listed as the mainstems of Black Sulphur and Hunter Creeks from their sources to their confluences with Piceance Creek - Segment 20 of the White River. Black Sulphur and Hunter Creeks have use designations of aquatic life cold 1, recreation 2, and agriculture. It is noted that there is an exception to Table Value Standards for iron (aquatic – chronic) in Segment 20.

The "Status of Water Quality in Colorado – 2004" (CDPHE, 2004b) was reviewed for information related to the project area drainages. White River Segment 20, including both Black Sulphur and Hunter Creeks, was noted to have fully-supporting aquatic life cold 1, not assessed recreation 2, and fully-supporting agriculture designated uses. White River Segment 20 has a Colorado integrated reporting category of 2, which is described as: "Some uses have been

assessed and all uses assessed are fully supporting the designated uses. Other uses have not been assessed."

Newly promulgated Colorado Regulations Nos. 93 and 94 (CDPHE, 2006c and 2006d, respectively) were also reviewed for information related to the proposed project area drainages. Regulation No. 93 is the State's list of water-quality-limited segments requiring Total Maximum Daily Loads (TMDLs). The 2006 list of segments needing development of TMDLs includes two segments within the White River - segment 9b, White River tributaries North & South Forks to Piceance Creek, specifically the Flag Creek portion (for impairment from selenium with a low priority for TMDL development) and segment 22, tributaries to the White River, Douglas Creek to the Colorado/Utah boarder, specifically West Evacuation Wash, and Douglas Creek (sediment impairments). Regulation 94 is the State's list of water bodies identified for monitoring and evaluation, to assess water quality and determine if a need for TMDLs exists. The list includes two White River segments that are potentially impaired – 9 and 22. Stream segment 20 has not been identified on the 303(d) or M&E List.

Ground Water: The project area is located within the Piceance Creek structural basin. Snowmelt and rain recharge the bedrock aquifers and replenish the ground water that migrates through the Uinta and Green River Formations (Tobin, 1987). Piceance Creek drainage basins upper and lower aquifers are separated by the semi-confining Mahogany Zone. Information presented in Topper et al. (2003) indicates the following approximate depths to potentiometric surfaces within hydrogeologic units: upper Piceance basin aquifer 600 feet, lower Piceance basin aquifer 700 feet, and Mesaverde aquifer 400 feet (based on a surface elevation of 7,400 feet). Water well data from the Colorado Division of Water Resources (Topper et al., 2003) indicated that in central Rio Blanco County water wells are not common in the basin. In the project area the total concentration of dissolved constituents in the upper and lower aquifers is generally lower than 1000 milligrams per liter. Primary hydrogeologic units within the Piceance Basin are listed in the following table.

Summary of Hydrogeologic Units						
Hydrogeologic Thickness Approx Avg Conductivity Yield Transmissivity Unit (ft) Depth (ft) (ft/day) (gpm) (ft²/day)						
<b>Upper Piceance Basin aquifer</b>	0 - 1,400	700	<0.2 to >1.6	1 to 900	610 to 770	
Lower Piceance Basin aquifer	0 - 1,870	2,800	<0.1 to >1.2	1 to 1,000	260 to 380	
Mesaverde aquifer   Averages 3,000   7,700   NL   NL   NL						
Abbreviations: ft – feet, approx – approximate, avg – average, gpm – gallons per minute, and NL – not listed.						

Table information from Topper et al. (2003).

Environmental Consequences of the Proposed Action: Surface Water: Water quality impacts may result from additional sediment generated at points where the proposed pipeline crosses roads and is buried. Removal of vegetative cover could also increase the potential for soil erosion from the newly disturbed areas. Also, the use of existing two-track roads during construction would decrease soil permeability elevating the potential for erosive overland flows. In addition installation of the surface pipeline may channel drainage of surface water along existing two-tracks increasing erosion and elevating sediment loads to Taylor Reservoir. Depending on the soils affected, salt content in the sediment may also degrade water quality.

An additional 600 square meters would be redisturbed in the roadway as a trench is dug across the road and then filled in. Impacts would continue until mitigation has been implemented and proven to be successful.

<u>Ground Water</u>: Water withdrawal from Taylor Reservoir would reduce the volume of water available for recharge to Piceance Creek and local alluvial/colluvial aquifers. Potential adverse impacts include augmented flow rates in Piceance Creek, altered stream channel/bank morphology in Hunter Creek, and deterioration of potential riparian habitat.

Environmental Consequences of the Buried Pipeline Alternative: This alternative would produce much more surface disturbance than the Proposed Action and would have greater potential for creating additional sediment. Vegetative cover would be removed and soil disturbed on an estimated at 15.6 acres on the pipeline route. Removal of vegetative cover would increase the potential for soil erosion from the newly disturbed areas. Runoff-producing storm events could increase sediment loads in ephemeral channels. Depending on the soils affected, salt content in the sediment may also degrade water quality. The same mitigation would be required as for the Proposed Action but its proper implementation would be more important since the disturbance is so much greater.

Environmental Consequences of the No Action Alternative: None.

*Mitigation*: The operator will be responsible for complying with all applicable local, state, and federal water quality regulations. The operator will also be required to provide the BLM with documentation that all required permits were obtained.

<u>Surface Water:</u> All surface disturbing activities will strictly adhere to "Gold Book" fourth edition surface operating standards for oil and gas exploration and development (copies of the "Gold Book" fourth edition can be obtained at the WRFO). Oil and gas development activities greater than 1 acre in size require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division, for construction associated with well pads, *pipelines*, roads and other facilities. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP on file with the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

The surface pipeline shall be constructed such that drainage of surface water from existing two-track roads is allowed to dissipate its energy away from the roadway. Surface pipelines will not confine surface water flow to the pipeline route.

When preparing the site, all suitable topsoil should be stripped from the surface of the location and stockpiled for reclamation once the pipeline installation is completed.

The borrow areas and roadways will be restored to their original form and dimension and compacted.

Ground Water: None

Finding on the Public Land Health Standard for water quality: Water quality in the stream segments within the project area meets the criteria established in the standard. With successful reclamation, the proposed and potential actions in the project area would not change this status.

#### CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED

No prime and unique farmlands, no flood plains, wetlands, riparian zones, and alluvial valleys, no wild and scenic rivers, no Areas of Critical Environmental Concern, and no wilderness exist within the project area. No Native American religious or environmental justice concerns are associated with the Proposed Action.

#### NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

#### **SOILS** (includes a finding on Standard 1)

Affected Environment: The soil types in the project area occur from 6,000 to 8,900 feet in elevation. The average annual precipitation in the project area is 14 to 22 inches, the average annual temperature is 37 to 45 degrees F, and the average frost-free period is approximately 80 to 105 days. The proposed pipeline construction activities would occur within four soil units inventoried by the Natural Resources Conservation Service (NRCS). Soil units, names, and characteristics are listed in the following table:

#### **Summary of Project Area Soil Units**

Soil Map Unit	Soil Unit Name	Slope (%)	Ecological Site	Effective Rooting Depth (in.)	Runoff	Erosion Potential	Bedrock Depth (in.)
36	Glendive fine sandy loam	2 - 4	Foothills Swale	> 60	Slow	Slight	> 60
64	Piceance fine sandy loam	5 – 15	Rolling Loam	20 – 40	Slow to medium	Moderate to high	20-40
70	Redcreek-Rentsac complex	5 - 30	Pinyon/Juniper Woodland	10-20	Medium	Moderate to high	10-20
73	Rentsac channery loam	5-50	Pinyon/Juniper Woodland	10-20	Rapid	Moderate to very high	10-20

Soil unit information from SCS (2004) Rio Blanco County.

The Piceance fine sandy loam has a listed salinity value of less than 2 mmhos per centimeter. Redcreek-Rentsac complex and Rentsac channery loam soil units have listed salinity values of less than 4 mmhos per centimeter. The Glendive soil unit has listed salinity values of <4 Mmhos per centimeter for the upper 6-inches and 2 to 8 Mmhos per centimeter for the 6- to 60-inch depth. All of the soil units but Glendive fine sandy loam indicate the potential for a fragile soil

with listed slope ranges that exceed 35 percent, the criteria that would trigger implementation of a Controlled Surface Use stipulation.

Environmental Consequences of the Proposed Action: Pipeline construction could remove surface cover and disturb soils, thus potentially increasing soil erosion and reducing soil health and productivity. The only soil disturbance would be at the points where the pipeline is buried to cross a road – near the F19 397 well pad and at the two other road crossings. An estimated 800 square meters of Piceance fine sandy loam would be disturbed at the CR 69 and Riata access road crossings, 400 square meters in the roadway and 400 in the vegetated area adjacent to the road. The same amount of Glendive fine sandy loam would be disturbed at the Hunter Creek Road crossing. The small area involved and the low slope at each location indicate a very small potential impact. After installation, about 600 square meters of road would be returned to its current state and about 600 square meters adjacent to the road would be reclaimed. Adherence to the mitigation for Water Quality regarding a Stormwater Management Plan and standard COAs will minimize impacts.

Environmental Consequences of the Buried Pipeline Alternative: A much greater area would be disturbed by this alternative than the Proposed Action, 15.6 acres compared to about 1,200 square meters. Pipeline construction could remove surface cover and disturb soils, thus potentially increasing soil erosion and reducing soil health and productivity. Most of the disturbance would be on Piceance fine sandy loam and Redcreek-Rentsac complex soils, each of which has relatively high erosion potential. The slope where these soils would be disturbed is however low, reducing the potential for erosion. More problematic is the 200-300 meter stretch of the pipeline route that goes uphill out of Hunter Creek up to Dry Ridge. The Rentsac channery loam here is on a steeper slope than the rest of the route and would be more likely to erode. Traffic associated with pipeline construction will increase soil compaction decreasing infiltration rates, which in turn will also increase potential for erosive overland flows. Improper drainage relief from the pipeline may cause runoff to be channelized down the pipeline route resulting in gully formation and increased hill slope soil erosion. Adherence to the mitigation for Water Quality regarding a Stormwater Management Plan and standard COAs will minimize impacts.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation*: See recommended mitigation for Water Quality regarding a Stormwater Management Plan and standard COAs.

Segregation of topsoil material and replacement of topsoil in its respective original position (last out, first in) would assist in the reestablishment of soil health and productivity.

Finding on the Public Land Health Standard for upland soils: Soils within the area of the Proposed Action meet the criteria established in the standard for upland soils. With successful reclamation, the Proposed Action would not change this status.

**VEGETATION** (includes a finding on Standard 3)

Affected Environment: The route of the proposed pipeline generally is located in a Wyoming sagebrush plant community or a pinyon/juniper woodland or a mix of the two. Pinyon tree ages are estimated at 50 to 150 years with only a few larger pinyon and junipers. There is considerable encroachment from pinyon pine in the sagebrush community.

Environmental Consequences of the Proposed Action: Installation of the surface pipeline would remove no vegetation except for about 600 square meters of sagebrush adjacent to the three road crossings. Although a small amount of vegetation, the longer the disturbance remains non-vegetated, the greater the chance for invasion of weedy plants. Some of those weedy species can create problems in future reclamation efforts and some may be totally non-desirable. Reclamation with an approved seed mix would minimize the risk of infestation.

Environmental Consequences of the Buried Pipeline Alternative: Installation of the buried pipeline would remove an estimated 15.6 acres of pinyon/juniper woodland and sagebrush. The longer the disturbance remains non-vegetated, the greater the chance for invasion of weedy plants. Some of those weedy species can create problems in future reclamation efforts and some may be totally non-desirable. Reclamation with an approved seed mix would minimize the risk of infestation.

Environmental Consequences of the No Action Alternative: None

*Mitigation*: All disturbed areas for the pipeline would be reclaimed within the first growing season or prior to the first full growing season following disturbance with the following seed mix.

Native Seed Mix #2				
Species	Seeding Rate (Pure Live Seed)*			
Western wheatgrass (Rosanna)	2.0 lbs/ac			
Indian ricegrass (Rimrock) 2.0 lbs/ac				
Bluebunch wheatgrass (Whitmar) 2.0 lbs/ac				
Thickspike wheatgrass (Critana) 1.0 lbs/ac				
Green needlegrass (Lodorm) 1.0 lbs/ac				
Globemallow or Utah sweetvetch 0.5 lbs/ac				
Antelope bitterbrush**  1.0 lbs/ac				
* Seeding rate for drill seeding. Double the	rate for broadcast/harrow seeding			
** Antelope bitterbrush added to this mix to mitigate loss of native shrubs from disturbed area.				

Successful re-vegetation should be achieved within three years. The operator will be required to monitor the project site(s) for a minimum of three years after construction to detect the presence of noxious/invasive species. Any such species that occur will be eradicated using materials and methods approved in advance by the Authorized Officer.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The plant communities within the area of the Proposed Action have an appropriate age structure and diversity of species which meet the criteria established in the standard for vegetation. With successful reclamation, the Proposed Action would not change this status.

#### **WILDLIFE, AQUATIC** (includes a finding on Standard 3)

Affected Environment: The only aquatic and riparian habitat within the project area occurs at Taylor Reservoir, the source of water for the project. The reservoir and surrounding shoreline are entirely on private land. The reservoir, some five acres in size, supports good emergent and shoreline vegetation. The shoreline is open to livestock grazing. The presence of fish in this privately owned reservoir is unknown. Year around inflow appears to maintain a constant water level. Waterfowl are present from early spring to late fall freeze-up. Waterfowl noted on March 20, 2006 included Canada geese, mallard, green-winged teal, American widgeon, coot and common goldeneye. A water take out facility is present on the west side of the reservoir, which includes a large pad, two large storage tanks and large hoses for pumping. Water rights are privately owned.

Environmental Consequences of the Proposed Action: None, other than water removal, which should be replenished by continual inflow. It is assumed that water not removed by piping at this location would be removed by truck or from other locations in the Hunter Creek drainage.

Environmental Consequences of the Buried Pipeline Alternative: Same as the Proposed Action.

*Environmental Consequences of the No Action Alternative:* None.

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): As the aquatic and riparian habitat associated with Taylor Reservoir would not be altered, no impacts on these habitats would occur and the standard will be met.

#### **WILDLIFE, TERRESTRIAL** (includes a finding on Standard 3)

Affected Environment: The project area occurs in Hunter Canyon and on Hunter Ridge to the west. The drainage and ridge slope to the north, terminating on Piceance Creek. Elevations vary from 7200 feet on the ridge top to 6550 in the bottom of Hunter Creek.

The entire project area is considered deer winter range, none of which is rated critical or severe. The entire area is elk winter range and an elk winter concentration area. Field observations on March 20, 2006, in the form of tracks (in snow and mud) and droppings, indicated moderate deer use and very light elk use at this time.

Road density-related impacts to big game (i.e., elevated energy demands, habitat disuse) received prominent address in the White River ROD/RMP. Analysis of the issue resulted in the development of a land use decision that established effective road density objectives of 3.0 miles per square mile on big game winter range habitats.

The relatively flat ridges and moderate slopes into Hunter Canyon provide marginal cliff habitat for raptor nesting. Cliff habitat along Hunter Creek was visually searched on March 20, 2006. No stick nests were noted and no raptors were observed. Several red-tailed hawk nests and one possible golden eagle or red-tail nest have been located in the lower 5 to 6 miles of Hunter Canyon, but none are within one mile of the project or would likely be affected.

Other than along CR 69, the pipeline route was walked and suitable woodland habitat searched for raptors or evidence of raptor nests. Only ¼ mile of the route (NWNE section 17 T3S R97W) was considered good woodland raptor nesting habitat. This area supported large, well-shaped pinyon/juniper trees with good canopy closure. The remainder of woodland habitat along the pipeline routes generally supported small to moderate size trees and only occasional well-structured (tall, large limbed) trees. The segment from CR 69 to Taylor Reservoir was walked and visually searched for raptor nests on two occasions, March 20 and April 10, 2006. Great horned owl calls were played following the protocol of Kennedy and Stahlecker, 1993 on both dates. Problems with the recorded calls reduced the effectiveness of this survey method on March 20, so the survey was repeated on April 10, 2006. No raptors or raptor responses were noted during the call surveys. One stick nest was located during visual walk-through surveys on April 10, 2006. Only remnants of the nest remained in a large juniper tree with little structure of the nest remaining. Below the tree were the more classic remains of many sticks often found below accipiter nests. This site is located several hundred yards from the proposed pipeline route.

Environmental Consequences of the Proposed Action: Pipeline installation would remove no big game hiding and foraging habitat. About 600 square meters of sagebrush would be removed adjacent to the three road crossings. Since this vegetation is adjacent to a main county road or the Hunter Creek Road, its functionality as habitat has already been compromised.

Environmental Consequences of the Buried Pipeline Alternative: Installation of the buried pipeline would remove about 16 acres of big game hiding and foraging habitat. Only a portion of the habitat would be lost long term as revegetation of the pipeline would take place within several years, restoring some of the habitat's function (but see below). The loss of sagebrush forage would be minor and the temporary loss of herbaceous forage would be regained shortly after reclamation.

The proposed right-of-way route would lie adjacent to existing well access or RBC 69 and would not provide any added impetus for off-road vehicle use than currently exists from these roads. The approximately 1450' of cross-country right-of-way, however, would provide a convenient vehicle short-cut between the county road and the Riata well. Based on previous experience, there would be a strong probability that this right-of-way would receive persistent use and become established as a vehicle way, foregoing long-term restoration efforts and compromising general habitat utility. Conventional efforts to deter vehicle use in gentle sagebrush terrain have been a universal failure. It is proposed that the applicant be responsible for erecting an openended fence originating from either end of this cross-country segment, with the intent of effectively deterring vehicle use along the right-of-way and allowing use and passage through the right-of-way corridor by livestock. Conceptually, the 4-strand Type-D fence would originate

from each roadside with 2 braced corners spanning the entire width of the right-of-way and extend toward the interior with 400-500' legs along the right-of-way margins with each leg terminating at a braced stretch panel.

Environmental Consequences of the No Action Alternative: None.

*Mitigation*: It is proposed that the applicant be responsible for erecting an open-ended fence originating from either end of this cross-country segment, with the intent of effectively deterring vehicle use along the right-of-way and allowing use and passage through the right-of-way corridor by livestock. Conceptually, the 4-strand Type-D fence would originate from each roadside with 2 braced corners spanning the entire width of the right-of-way and extend toward the interior with 400-500' legs along the right-of-way margins with each leg terminating at a braced stretch panel. It is important that fence installation work be conducted from the right-of-way such that a 2-track is not formed outside the fence.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): This project would not jeopardize the viability of any animal population. As conditioned, it would have no significant consequence on terrestrial habitat condition, utility, or function, nor have any discernible effect on animal abundance or distribution at any landscape scale. The public land health standard will thus be met.

**OTHER NON-CRITICAL ELEMENTS:** For the following elements, only those checked in the last column will be addressed further in this EA.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access & Transportation			X
Cadastral Survey	X		
Fire Management			X
Forest Management			X
Geology and Minerals		X	
Hydrology/Water Rights	X		X
Law Enforcement		X	
Noise		X	
Paleontology			X
Rangeland Management			X
Realty Authorizations			X
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

#### ACCESS AND TRANSPORTATION

Affected Environment: The principal access route into the project area is on County Roads 26, 87 and 69 which proceed south from the Piceance Creek Road (County Road 5) and up onto Dry Ridge. Taylor Reservoir and the east end of the pipeline are accessed from CR 5 along the Hunter Creek road (BLM Road 1011A where it crosses public land). The county roads and the Hunter Creek Road have become principal access routes for oil and gas development activities in the Figure Four and Eureka Units and traffic has increased markedly, especially on the county roads up to and along Dry Ridge. Well drilling equipment, pipeline construction equipment and gas production traffic travels along the road throughout the day.

The entire Proposed Action is within an area where motorized vehicle traffic is limited to existing roads from October 1 to April 30 each year. Cross-country motorized vehicle travel is allowed from May 1 to September 30 as long as no resource damage occurs as a result.

Environmental Consequences of the Proposed Action: Pipeline construction equipment would travel along both access routes to the project site. The increase in traffic produced by this would be inconsequential against the already existing oil and gas traffic. The installation of the pipeline would not present an opportunity for increased off-road traffic since no two-track roads would be improved and no new pipeline corridors would be created.

Environmental Consequences of the Buried Pipeline Alternative: Increased traffic on existing roads would be about the same as the Proposed Action. The creation of a new pipeline corridor would improve the opportunity for cross-country travel on Dry Ridge east of CR 69 but would probably not generate much increase in off-road traffic since the distance is not great and there are already several other routes in the area. Obstructions placed at either end of the pipeline corridor would probably not be effective in controlling traffic since it would not be difficult to get around them.

The installation of the pipeline up the ridge from Hunter Creek presents an opportunity to remove the existing two-track up the hillside, install barriers to future traffic and revegetate the surface. However, most of that portion of the route is on private land.

*Environmental Consequences of the No Action Alternative:* None.

Mitigation: None.

#### FIRE MANAGEMENT

Affected Environment: The proposed pipeline involves approximately 12,793 feet of corridor clearing for an approximate total of 14.7 acres of disturbance in pinyon/juniper. Due to the existing tree cover of pinyon and juniper, there will be a need for the operator to clear these trees. If not adequately treated, these trees will result in elevated hazardous fuels conditions and remain on-site for many years. These accumulations of dead material are very receptive to fire

brands and spotting from wind driven fires and can greatly accelerate the rate of spread of the fire front.

The National Fire Plan calls for "firefighter and public safety" to be the highest priority for all fire management activities. In the pinyon, juniper, and brush types common on the White River Resource Area, roads and other man-made openings are commonly used as fuel breaks or barriers to control the spread of both wildland and prescribed fires. By reducing the activity fuels created from this proposal, future fire management efforts in this area should be safer for those involved and more effective.

*Environmental Consequences of the Proposed Action:* Surface pipelines generally do not impact woodland resources.

Environmental Consequences of the Buried Pipeline Alternative: There will be approximately 14.7 acres of pipeline construction requiring the removal of pinyon/juniper fuel that ranges from 10-40 tons/acre. If not treated, the slash and woody debris would create an elevated hazardous dead fuel loading that could pose significant control problems in the event of a wildfire. Additionally there would be a greater threat to the public and to fire suppression personnel.

Environmental Consequences of the No Action Alternative: None

*Mitigation*: Vegetative material brought back onto the pipeline should not exceed 2-5 tons/acre in any given location. Excess material should be distributed along sections of the pipeline that traverse through sagebrush habitats or less dense PJ sites or chipped and scattered along the corridor.

#### FOREST MANAGEMENT

Affected Environment: Approximately 12,793 feet of pipeline would be constructed within pinyon/juniper woodlands. These woodlands are variable in age, density and composition. These stands were not considered as suitable for commercial use within our current land use plan. These stands do provide firewood, juniper posts and Christmas trees to the local market.

*Environmental Consequences of the Proposed Action:* Surface pipelines generally do not impact woodland resources.

Environmental Consequences of the Buried Pipeline Alternative: Under the proposed action, approximately 15 acres of pinyon/juniper woodland would be removed. Following reclamation, pinyon and juniper would invade the site and develop into a mature stand. Development of a mature stand is expected to occur over a 150 to 200 year period. Removal of the trees increases the opportunity for increasing populations of bark beetles. With the mitigation listed below the volume of material for insects would be decreased limiting the

opportunity for an outbreak. There may still be increased numbers of bark beetles that could kill pinyons immediately adjacent to the corridor.

*Environmental Consequences of the No Action Alternative*: There would be no impacts.

Mitigation: Concur with the Fire Management Mitigation.

#### **HYDROLOGY AND WATER RIGHTS:**

Affected Environment: Water rights for Taylor Reservoir were filed through the Colorado Judicial Court; Water Division 6 (White River Basin) in case number 81CW404. Case number 81CW404 decreed a total water volume of 170 acre feet (17.588 million barrels (US liq)) per year to Shell Oil Company for the following uses: irrigation, industrial, livestock, and domestic water supply.

Environmental Consequences of the Proposed Action: Water withdrawal from Taylor Reservoir will reduce the volume of water available for recharge to Piceance Creek and local alluvial/colluvial aquifers. Potential adverse impacts include augmented flow rates in Piceance Creek and altered stream channel/bank morphology in Hunter Creek.

Environmental Consequences of the Buried Pipeline Alternative: Water withdrawal from Taylor Reservoir will reduce the volume of water available for recharge to Piceance Creek and local alluvial/colluvial aquifers. Potential adverse impacts include augmented flow rates in Piceance Creek, altered stream channel/bank morphology in Hunter Creek, and deterioration of potential riparian habitat.

Mitigation: None

Environmental Consequences of the No Action Alternative: None

#### **PALEONTOLOGY**

Affected Environment: The proposed pipeline construction is located in an area mapped as the Uinta Formation (Tweto 1979). BLM has classified the Uinta as a Category I formation, meaning that it is a known producer of scientifically significant fossils.

Environmental Consequences of the Proposed Action: If it becomes necessary to excavate into the underlying rock formation to bury the pipeline there is a potential to impact scientifically important fossil resources. A surface line that involves no excavation could impact any fossils located on exposed rock outcrops along the proposed pipeline route.

Environmental Consequences of the Buried Pipeline Alternative: Since this alternative calls for burying the pipeline within an area that has the Uinta formation, there is potential for impacting fossil resources if it is necessary to excavate into the underlying bedrock formation to install the pipeline.

#### Environmental Consequences of the No Action Alternative: None

*Mitigation*: For all alternatives: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

For all alternatives: All exposed rock outcrops in the project area that can be safely examined shall be examined by an approved paleontologist with a report detailing the results of the inventory; any mitigation recommendation would be submitted to the BLM prior to the initiation of construction in the pipeline right-of-way.

For the buried pipeline alternative a monitor shall be present at any time that it becomes necessary to excavate into the underlying bedrock formation in order to bury the pipeline.

#### RANGELAND MANAGEMENT

Affected Environment: The proposed action occurs within the Ira Johnson use area of the Piceance Mountain allotment which is licensed for grazing use as follows:

Allotment Number	Allotment Name	Permit Number	Livestock Number	Kind	Date On	Date Off	% BLM	AUMs
06023	Piceance Mountain	051408	1026	С	05/15	11/15	61	3807

*Environmental Consequences of the Proposed Action:* The proposed action will result in minor short term disturbance which if it is promptly and effectively revegetated will result in the short term loss of 1 AUM of forage production.

Environmental Consequences of the Buried Pipeline Alternative: The proposed action will result in the long term loss of about 2 AUMs of livestock forage. If areas of earthen disturbance are not promptly and effectively revegetated domination of these sites by noxious and invasive species is likely. Further, if noxious and invasive species spread from the disturbed sites, the long term result could be a loss of as many as 50 AUMs of forage production. If airborne dust coats vegetation adjacent to roads, the usability of that vegetation for forage will be negatively impacted, which in combination with truck traffic and other such physical disturbance, could result an additional long term loss of 10-20 AUMs of forage.

*Environmental Consequences of the No Action Alternative:* There will be no change from the present situation.

*Mitigation*: If construction/development occurs between April 15 and November 15, the operator will be required to water or surface access roads to reduce airborne dust and damage to roadside vegetation communities.

#### REALTY AUTHORIZATIONS

Affected Environment: The main access routes to the project area would be county roads, from Black Sulphur Creek (CR 26) up to Dry Ridge (CR 69), and the road up Hunter Creek, which is across private and public land. The rights-of-way across BLM for the county roads are held by Rio Blanco County. The proponent has a BLM right-of-way for those portions of the Hunter Creek Road that cross BLM (COC66509). The pipeline proposed to be installed next to existing roads would require a BLM right-of-way.

*Environmental Consequences of the Proposed Action:* No rights-of-way would be required for access. The installation of the pipeline would require a BLM right-of-way and the proponent has applied for one, serialized as COC-69835.

Environmental Consequences of the Buried Pipeline Alternative: Same as the Proposed Action except the proponent would have to amend its right-of-way application to indicate the new route and the change in manner of installation.

Environmental Consequences of the No Action Alternative: None.

Mitigation: 1. The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the authorized

officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost.

- 2. The holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.
- 3. When construction activity in connection with the right-of-way breaks or destroys a natural barrier used for livestock control, the gap, thus opened, shall be fenced to prevent the drift of livestock. The subject natural barrier shall be identified by the authorized officer and fenced by the holder as per instruction of the authorized officer.
- 4. The holder shall inform the authorized officer within 48 hours of any accidents on federal lands that require reporting to the Department of Transportation as required by 49 CFR Part 195.
- 5. The holder is prohibited from discharging oil or other pollutants into or upon the navigable waters of the United States, adjoining shorelines, or the waters of the contiguous zone in violation of Section 311 of the Clean Water Act as amended, 33 U.S.C. 1321, and the regulations issued thereunder, or applicable laws of the State(s) of Colorado and regulations issued thereunder. Holder shall give immediate notice of any such discharge to the authorized officer and such other Federal and State officials as are required by law to be given such notice.
- 6. Prior to any discharge, hydrostatic testing water will be tested and processed, if necessary, to ensure that the water meets local, State or Federal water quality standards. Prior to discharge of hydrostatic testing water from the pipeline, the holder shall design and install a suitable energy dissipator at the outlets, and design and install suitable channel protection structures necessary to ensure that there will be no erosion or scouring of natural channels within the affected watershed as a result of such discharge. The holder will be held responsible for any erosion or scouring resulting from such discharge. Sandbags, rock, or other materials or objects installed shall be removed from the site upon completion of hydrostatic testing.
- 7. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
- 8. Prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a pre-termination conference. This conference will be held to review the termination provisions of the grant.

#### RECREATION

Affected Environment: The Proposed Action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The project area most closely resembles a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). A natural appearing environment with few administrative controls typically characterizes an SPM recreation setting; there is low interaction between users but evidence of other users may be present. An SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment with challenge and risk.

Recreation use of the area is low but becomes seasonally more intense during hunting season because public access to the area is available (the county roads up to Dry Ridge). Several hunting campsites are located on the west side of CR 69 along Dry Ridge.

Environmental Consequences of the Proposed Action: The impacts on the recreation experience would be low because use is low and because the construction would be a temporary activity, only likely to disturb recreationists if construction were to take place during the fall hunting season. The pipeline right-of-way would not be visible because of its low profile and the area would retain its primarily natural appearance.

Environmental Consequences of the Buried Pipeline Alternative: The impacts would be the same as those for the Proposed Action except that the pipeline right-of-way would be visible in some areas in the foreground because of the linear alteration in the vegetation along the route. Overall though, the area would retain its primarily natural appearance.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

#### VISUAL RESOURCES

Affected Environment: The project area is on private land and on public lands administered by BLM that have received a VRM Class III designation. The management goal for this class is to partially retain the existing character of the landscape. The change brought about by activities on lands with VRM III designation may be evident. The visual contrast may be moderate but should not dominate the natural landscape character. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

County Road 69 provides public access to the project area and the opportunity for recreation use, and view of the landscape, is consequently higher than in other portions of the Eureka/Double Willow area. However, visual sensitivity remains low because the road is not a through road and recreation use increases only seasonally, during the later hunting seasons. Additionally, distance and intervening terrain shield the area from the most highly traveled route in the area, the Piceance Creek Road (CR 5). Local ranchers and a growing number of oil and gas company employees and contractors make up most of the potential viewing public.

Environmental Consequences of the Proposed Action: The pipeline adjacent to the county road and other roads in the project area would not alter the landscape character. The installation of the pipeline would not require removal of vegetation or recontouring of the natural

surface. The only landscape modification would be the introduction of the surface pipeline itself. Because it would have a low profile and because its line would parallel the line of the roads, it would only draw the eye in the immediate vicinity. The character of the landscape would be partially retained, meeting the standard of the VRM III classification.

Environmental Consequences of the Buried Pipeline Alternative: The installation of a buried pipeline would require removal of vegetation, including pinyon and juniper trees as tall as 20 feet. The landscape modification would be visible from CR 69 and from the Hunter Creek Road and, because trees would be removed, would be visible for perhaps 100 years. However, the modification would not be visible from the most highly trafficked road in the region, CR 5, and would generally not be visible from any location in the middle or far distance. Overall, the character of the landscape would be retained, meeting the standard of the VRM III classification.

Environmental Consequences of the No Action Alternative: None

*Mitigation*: All permanent (onsite for six [6] months or longer) structures, facilities and equipment placed onsite shall be low profile and painted Munsell Soil Color Chart Juniper Green or equivalent within six months of installation. An exception to this is the pipeline itself. Any pipeline laid on the surface should be unpainted and unwrapped.

<u>CUMULATIVE IMPACTS SUMMARY:</u> Cumulative impacts from oil and gas development were analyzed in the White River Resource Area ROD/RMP. Current development, including the installation of the surface pipeline from Taylor Reservoir, has not exceeded the foreseeable development analyzed in the ROD/RMP.

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- Tweto, Ogden. 1979. Geologic Map of Colorado. United States Geologic Survey, Department of the Interior. Reston, Virginia.
- USDI, Bureau of Land Management, Colorado. 2004. Glenwood Springs Resource Management Plan Amendment for the Roan Plateau and Draft Environmental Impact Statement. November, 2004.

**PERSONS / AGENCIES CONSULTED:** None

## **INTERDISCIPLINARY REVIEW:**

Project Team						
Name	Title	Area of Responsibility				
BLM Oversight						
Penny Brown	Realty Specialist	Project Lead; Realty Authorizations				
Ed Hollowed	Wildlife Biologist	Migratory Birds; Threatened, Endangered and Sensitive Animal Species; Wildlife; Wetlands and Riparian Zones				
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern; Threatened and Endangered Plant Species				
Chris Ham	Outdoor Recreation Planner	Recreation; Wilderness; Access and Transportation				
Mark Hafkenschiel	Rangeland Management Specialist	Vegetation; Invasive, Non-Native Species; Rangeland Management				
Michael Selle	Archeologist	Cultural and Paleontological Resources				
Nate Dieterich	Hydrologist	Air Quality; Water Quality, Surface and Ground; Hydrology and Water Rights; and Soils				
Keith Whitaker	Natural Resource Specialist	Visual Resource Management				
Ken Holsinger	Natural Resource Specialist	Fire Management				
Robert Fowler	Forester	Forest Management				
Marvin Hendricks	Petroleum Engineer	Wastes, Hazardous or Solid				
Paul Daggett	Mining Engineer	Geology and Minerals				
	WestWater Engineering (Third Party Contractor)					
Dan McWilliams	Senior Engineer	Air Quality, Soils, Water Quality, Surface and Ground; Hydrology and Water Rights; Geology and Minerals				
Grand River Institute (Carl Conner)	Archaeologist	Cultural Resources				
Steve Moore	Environmental Scientist	Areas of Critical Environmental Concern; Paleontological Resources; Wastes, Hazardous or Solid; Access and Transportation; Wilderness; Realty Authorizations; Recreation; and Visual Resources				
Rich Alward	Botanist	Threatened and Endangered Plant Species; Invasive, Non-Native Species; Wetlands and Riparian Zones; Vegetation; Fire Management; Rangeland Management; and Wild Horses				
Doug McVean	Wildlife Biologist	Migratory Birds; Threatened, Endangered and Sensitive Animal Species; Wildlife, Terrestrial and Aquatic				
Mike Klish	Environmental Scientist	Forest Management				

# Finding of No Significant Impact/Decision Record (FONSI/DR) CO-110-2006-126-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment, analyzing the environmental effects of the Proposed Action and the alternatives, has been reviewed. The approved mitigation measures (attached to the right-of-way as stipulations) for the Proposed Action and the Buried Pipeline Alternative result in a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of either the Proposed Action or the Buried Pipeline Alternative.

WestWater Engineering, an environmental consulting firm, with the guidance, participation, and independent evaluation of the Bureau of Land Management (BLM), prepared this document. The BLM, in accordance with 40 CFR 1506.5 (a) and (c), is in agreement with the findings of the analysis and approves and takes responsibility for the scope and content of this document.

<u>DECISION/RATIONALE</u>: The applicant has modified its right-of-way application indicating its wish to bury the pipeline. Therefore, it is my decision to approve the Buried Pipeline Alternative with the mitigation listed below. The Buried Pipeline Alternative is in concert with the objectives of the White River ROD/RMP in that it would allow development of federal oil and gas resources in a manner that provides reasonable protection for other resource values. Protection for other resource values will be assured by implementation of the mitigation measures described below and attached to the right-of-way as stipulations.

#### **MITIGATION MEASURES**:

- 1. All areas cleared of vegetation for construction operations must be promptly re-seeded as outlined in the vegetation section of this document.
- 2. The operator is responsible for informing all persons associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. Should historic or archaeological materials be uncovered during any project or construction activities, the operator will immediately stop activities in the immediate area of the find that might further disturb such materials, and contact the authorized officer (AO). Within five working days, the AO will inform the operator as to:
  - whether the materials appear eligible for the National Register of Historic Places;
  - the mitigation measures the operator will likely have to undertake before the site could be used (assuming *in situ* preservation is not necessary); and
  - a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes at any time to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will be allowed to resume construction.

- 3. Pursuant to 43 CFR 10.4(g), the holder of this authorization must notify the AO by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.
- 4. Any invasive, non-native plants will be eliminated before any seed production has occurred. Eradication will make use of materials and methods approved in advance by the Authorized Officer.
- 5. The operator will clean all off-road equipment to remove seed and soil prior to commencing operations on public lands within the project area.
- 6. The operator will collect and properly dispose of any solid wastes generated by the pipeline installation.
- 7. The operator will be responsible for complying with all applicable local, state, and federal water quality regulations. The operator will also provide the BLM with documentation that all required permits were obtained.
- 8. All surface disturbing activities will strictly adhere to "Gold Book" fourth edition surface operating standards for oil and gas exploration and development (copies of the "Gold Book" fourth edition can be obtained at the WRFO).
- 9. Oil and gas development activities greater than 1 acre in size require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division, for construction associated with well pads, *pipelines*, roads and other facilities. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP on file with the White River Field Office and to implement the BMPs in that plan as on-site conditions warrant.
- 10. The borrow areas and roadways will be restored to their original form and dimension and compacted.
- 11. Segregation of topsoil material and replacement of topsoil in its respective original position (last out, first in) would assist in the reestablishment of soil health and productivity.

12. All areas disturbed by the pipeline installation will be reclaimed within the first growing season or prior to the first full growing season following disturbance with the following seed mix:

Native Seed Mix #2				
Species	Seeding Rate (Pure Live Seed)*			
Western wheatgrass (Rosanna)	2.0 lbs/ac			
Indian ricegrass (Rimrock)	2.0 lbs/ac			
Bluebunch wheatgrass (Whitmar)	2.0 lbs/ac			
Thickspike wheatgrass (Critana)	1.0 lbs/ac			
Green needlegrass (Lodorm)	1.0 lbs/ac			
Globemallow or Utah sweetvetch 0.5 lbs/ac				
Antelope bitterbrush**  1.0 lbs/ac				
* Seeding rate for drill seeding. Double the rate for broadcast/harrow seeding				

\*\* Antelope bitterbrush added to this mix to mitigate loss of native shrubs from disturbed area.

Successful revegetation should be achieved within three years. The operator will be required to monitor the project site(s) for a minimum of three years post-construction to detect the presence of noxious/invasive species. Any such species will be eradicated using materials and methods approved in advance by the Authorized Officer.

- 13. The applicant will erect an open-ended fence originating from either end of the cross-country segment of the pipeline, with the intent of effectively deterring vehicle use along the right-ofway and allowing use and passage through the right-of-way corridor by livestock. Conceptually, a 4-strand Type-D fence would originate from each roadside with 2 braced corners spanning the entire width of the right-of-way and extending toward the interior with 400-500' legs along the right-of-way margins, with each leg terminating at a braced stretch panel. It is important that fence installation work be conducted from the right-of-way such that a 2-track is not formed outside the fence.
- 14. Vegetative material brought back onto the pipeline should not exceed 2-5 tons/acre in any given location. Excess material should be distributed along sections of the pipeline that traverse through sagebrush habitats or less dense Pinyon/Juniper sites or chipped and scattered along the corridor.
- 15. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
  - whether the materials appear to be of noteworthy scientific interest
  - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the

- required mitigation has been completed, the operator will then be allowed to resume construction.
- 13. All exposed rock outcrops in the project area that can be safely examined shall be examined by an approved paleontologist with a report detailing the results of the inventory; any mitigation recommendation would be submitted to the BLM prior to the initiation of construction in the pipeline right-of-way.
- 14. A monitor shall be present at any time that it becomes necessary to excavate into the underlying bedrock formation in order to bury the pipeline.
- 15. The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the authorized officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost.
- 16. The holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.
- 17. When construction activity in connection with the right-of-way breaks or destroys a natural barrier used for livestock control, the gap, thus opened, shall be fenced to prevent the drift of livestock. The subject natural barrier shall be identified by the authorized officer and fenced by the holder as per instruction of the authorized officer.
- 18. The holder shall inform the authorized officer within 48 hours of any accidents on federal lands that require reporting to the Department of Transportation as required by 49 CFR Part 195.
- 19. The holder is prohibited from discharging oil or other pollutants into or upon the navigable waters of the United States, adjoining shorelines, or the waters of the contiguous zone in violation of Section 311 of the Clean Water Act as amended, 33 U.S.C. 1321, and the regulations issued thereunder, or applicable laws of the State(s) of Colorado and regulations issued thereunder. Holder shall give immediate notice of any such discharge to the authorized officer and such other Federal and State officials as are required by law to be given such notice.

- 20. Prior to any discharge, hydrostatic testing water will be tested and processed, if necessary, to ensure that the water meets local, State or Federal water quality standards. Prior to discharge of hydrostatic testing water from the pipeline, the holder shall design and install a suitable energy dissipator at the outlets, and design and install suitable channel protection structures necessary to ensure that there will be no erosion or scouring of natural channels within the affected watershed as a result of such discharge. The holder will be held responsible for any erosion or scouring resulting from such discharge. Sandbags, rock, or other materials or objects installed shall be removed from the site upon completion of hydrostatic testing.
- 21. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment
- 22. Prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a pre-termination conference. This conference will be held to review the termination provisions of the grant.
- 23. All permanent (on-site for six months or longer) structures, facilities, and equipment placed on-site will be low profile and painted Munsell Soil Color Chart Juniper Green or equivalent within six months of installation.
- 24. If construction/development occurs between April 15 and November 15, the operator will be required to water or surface access roads to reduce airborne dust and damage to roadside vegetation communities.
- 25. When preparing the site, all suitable topsoil should be stripped from the surface of the location and stockpiled for reclamation once the pipeline installation is completed.

NAME OF PREPARER: WestWater Engineering, Grand Junction, CO 81505

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL:

Field Manager

DATE SIGNED:

ATTACHMENTS: Figure 1-Location Map of the Proposed Action

Figure 2-Map of the Taylor Reservoir Pipeline Project Area

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